Examiner's Copy

S

AN 110:197629 HCA
TI Fine **copper** wires and their manufacture
IN Tanigawa, Toru; Kurihara, Masaaki; Shiga, Shoji; Kaga, Ichiro; Inaba, Toshiaki
PA Furukawa Electric Co., Ltd., Japan; Furukawa Tokushu Kinzoku Kogyo K. K.
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63235442	A2	19880930	JP 1987-69591	19870324

AB The wires (**Cu purity** .gtoreq.99.999 %) esp. for electronic devices are manufd. from **Cu** contg. Fe, **Ag**, and/or **Sn** 0.1-9 and Zr 0.1-2.5 ppm, with the total amt. of the alloying elements 0.2-9.5 ppm, by melting and casting in vacuum or nonoxidizing atm., drawing at final drawing ratio r = 70-99.9%, and annealing to give elongation e = 2-20%. Thus, **Cu** contg. Zr 0.8 and Fe 4.2 ppm was melted, cast into a 25 .times. 140-mm billet, machined to 20 .times. 100-mm specimen, hot rolled to 10-mm diam., drawn at r = 92%, vacuum annealed at 350.degree. to 25-.mu.m-diam. wire, and finally annealed at 250-400.degree. in Ar. The resp. rupturing load and elongation for the obtained wire were 12.3 g and 14.3% vs. 12.1 g and 4.1% for the conventional fine Au wire. The obtained **Cu** wire also showed excellent bonding properties.